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ARGOPHYLLUM VERAE (SAXIFRAGACEAE), A NEW SPECIES FROM NORTHERN QUEENSLAND

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Summary

Argophyllum verae sp. nov. occurs on Cape York Peninsula in northern Queensland. A key and comparative table to distinguish it from other species of _Argophyllum_ in Australia is given.

During botanical exploration of the area between Moreton Telegraph Station and Temple Bay, Cape York Peninsula, I collected flowering material of a species of *Argophyllum*. Subsequent comparison of this material with collections of *Argophyllum lejourdanii* F. Muell., *A. nullumense* R. Baker or *A. cryptophlebum* Zemann held at the Queensland Herbarium or Australian National Herbarium, Atherton, showed that it is specifically distinct from all previously known species of *Argophyllum* from Australia; nor can it be matched with any taxa described by Zemann (1907) in her revision of the genus.

Argophyllum verae P. Forster **sp. nov.** affinis *A. lejourdanio* F. Muell. sed margine foliorum integro, sepalis 2.3–2.5 mm longis, petalis 2.2–2.3 mm longis indumento denso intus, ratione longitinis petali sepalo 0.9–1.0, filis staminum c. 1 mm longis et basi ovarii valde papillata differt. **Typus:** 1 km N of Maloney's Springs, 12°27′S, 142°55′E, 19 June 1989, *P.I. Forster* 5285 & *M.C. Tucker* (holo: BRI (3 sheets); iso: CANB,K,MEL,MO,P,QRS).

Erect perennial shrub to 3 m tall. Stems to 3 cm diameter, with dense indumentum of white hairs. Leaves alternate, ovate, up to 15 cm long and 7.5 cm wide, tip acuminate, base cuneate, margins undulate, entire or very occasionally with small isolated teeth c. 0.5 mm long; discolourous, upper surface green with isolated to sparse indumentum of white hairs, lower surface with dense indumentum of white hairs giving a white appearance; secondary veins 10 on each side of midrib, tertiary veins prominently raised below. Inflorescence axillary, up to 3 cm long, but not extending beyond the leaves, with dense indumentum of white hairs on axes and perianth parts; peduncle up to 5 mm long, 1.4–1.5 mm diameter; bracts linear-lanceolate, 0.5–1 mm long, 0.4–0.5 mm wide, with dense indumentum of white hairs. Flowers 3.8–4.2 mm long, 3.5–3.8 mm diameter; pedicels 1–1.6 mm long, c. 1 mm diameter, with dense indumentum of white hairs. Receptacle 1.5–1.6 mm long, 3.5–3.8 mm wide, with dense indumentum of white hairs. Sepals 5, triangular-acute, 2.3–2.5 mm long and c. 1.7 mm wide, with dense indumentum of white hairs. Corolla cream; petals lanceolate, 2.2–2.3 mm long, 1–1.1 mm wide, incurved over top of stigma, with dense indumentum of white hairs both externally and internally. Anthers c. 0.8 mm long and 0.6 mm wide. Filaments c. 1 mm long, lowest c. 0.6 mm fused to middle of sepal-base. Styles 2, c. 0.7 mm long, style-head 0.6–0.7 mm diameter. Ovaries 4, fused in flower, c. 2.5 mm long, 2.8–3 mm diameter, lowest c. 0.6 mm strongly papillate; each ovary 2.4–2.5 mm long, 1.5 mm wide, becoming brown at maturity and the whole splitting apart to release the seeds. Seed globose to somewhat reniform, brown, 0.5–0.6 mm long, c. 0.4 mm wide, with reticulate surface patterning.

Specimens examined: Thus far known only from the type collection.

Distribution and habitat: Maloney's Springs occurs at the southern end of the Glennie Tableland on far northern Cape York Peninsula, an area of raised sandstone clifflines and gorges. The main vegetation communities in the area are open eucalypt forest on sandy soils and palm-dominated rainforest communities on the bottom of sandstone gorges where there is permanent running water. The population of *A. verae* occurs on narrow sandstone ledges next to the open eucalypt forest and overlooking the rainforest-inhabited gorges. Plants may be intolerant of fire as none were observed on ledges where there was evidence of past fires. Other plants noted in close proximity included *Gardenia* *psidioides* (which is also restricted to the general area), *Spermacoce* sp. (*Forster* 5291), *Acacia calyculata*, *Lamprolobium fruticosum*, *Anthobolus filifolius*, *Stylidium* sp. (*Forster* 5295), *Dodonaea polyandra* and *Welchiodendron longivalve*.

Notes: The only known population of *A. verae* occurs at least 500 km to the north-north-west of the nearest populations of *A. lejourdanii* which appears to be its closest relative in Australia on gross morphological grounds (**Table 1**). *A. lejourdanii* also grows on open rock platforms, but these are predominantly of granite or slate. *A. verae* appears to be the only species in the Glennie Tableland area that is restricted to the sandstone clifflines, as other associated species occur also in the adjoining plant communities.

Table 1. Comparison of morphological characters for Australian species of *Argophyllum*.

Character	*A. verae*	*A. nullumense*	*A. cryptophlebum*	*A. lejourdanii*
leaf shape	ovate	oblong-elliptic	ovate	oblong-elliptic to ovate
secondary vein number per side of midrib	10	9–12	5–7	9–13
tertiary veins	raised	obscure	obscure	raised
petiole length (mm)	25–30	10–15	15–20	20–25
leaf teeth	± absent	present	present	present
leaf teeth number	0–3	5–8	11–17	9–54
sepal length (mm)	2.3–2.5	1–1.5	0.9–1.0	1.2–1.5
petal length (mm)	2.2–2.3	3.7–4	2.8–4	2.5–3
petal:sepal length ratio	0.90–1.0	2.7–4	3–4	2–2.1
ovary number	4	2 or 3	2 or 3	2 or 3

Conservation status: *A. verae* is known only from the type locality where 10–20 mature plants were present. One small seedling was seen. Examination of other sandstone clifflines in the vicinity of Maloney's Springs and on the eastern side of the Glennie Tableland did not reveal further populations; however it is to be expected that further populations exist in the Glennie Tableland sandstones. A conservation coding of 1K (Briggs & Leigh 1988) is accorded this species.

Etymology: *A. verae* is named for Vera Scarth-Johnson, the well-known botanical artist and plant collector of Cooktown. Vera has contributed many specimens both to the Queensland Herbarium and the Royal Botanic Gardens, Kew, England.

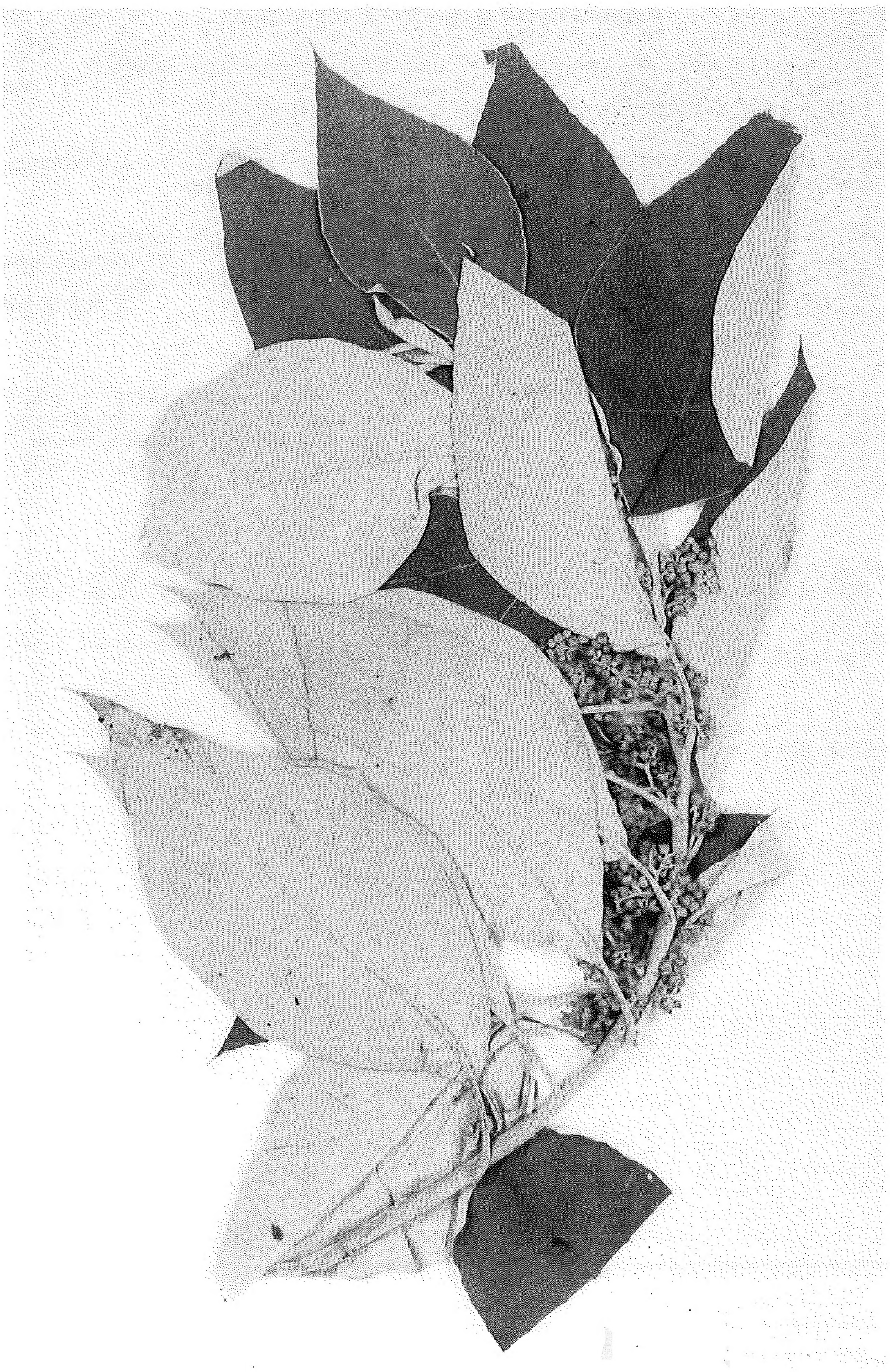

Fig. 1. *Argophyllum verae*: Flowering branch × 0.5. From Forster 5285 & Tucker.

Key to Australian species of *Argophyllum*

1. Leaf margins entire, or with occasional minute tooth; petal:sepal length ratio 0.9–1; ovaries 4 . . . . **A. verae**
   Leaf margins toothed; petal:sepal length ratio 2–4; ovaries 2–3 2

2. Leaf teeth 5–8 on each side of lamina; petiole length 8-16 mm . . . . **A. nullamense**
   Leaf teeth 9–54 on each side of lamina; petiole length 15–25 mm 3

3. Secondary veins per side of midrib in leaf blade 5–7; petal:sepal length ratio 3–4 . . . . **A. cryptophlebum**
   Secondary veins per side of midrib in leaf blade 9–13; petal:sepal length ratio 2–2.1 . . . . **A. lejourdanii**

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